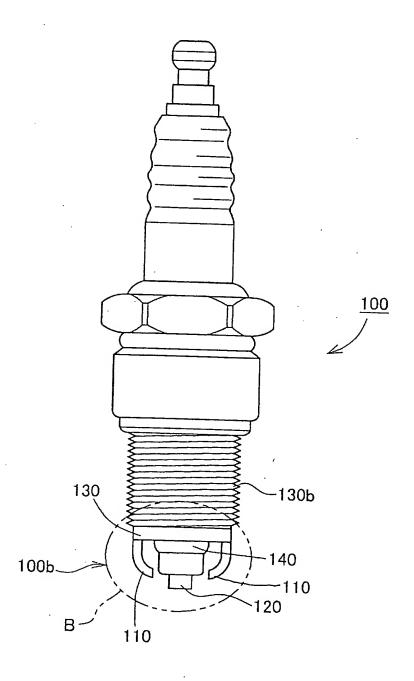
INVENTOR(S): Satoko ITO et al.
TITLE: SPARK PLUG FOR USE IN
INTERNAL COMBUSTION ENGINE
DOCKET NO.: NG8775US

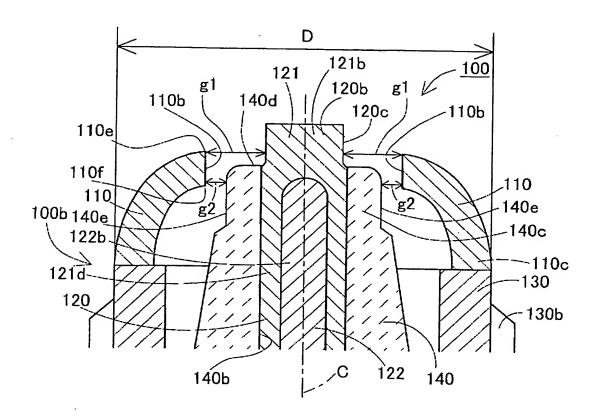
FIG. 1



INVENTOR(S): Satoko ITO et al.
TITLE: SPARK PLUG FOR USE IN
INTERNAL COMBUSTION ENGINE NEW APPLICATION

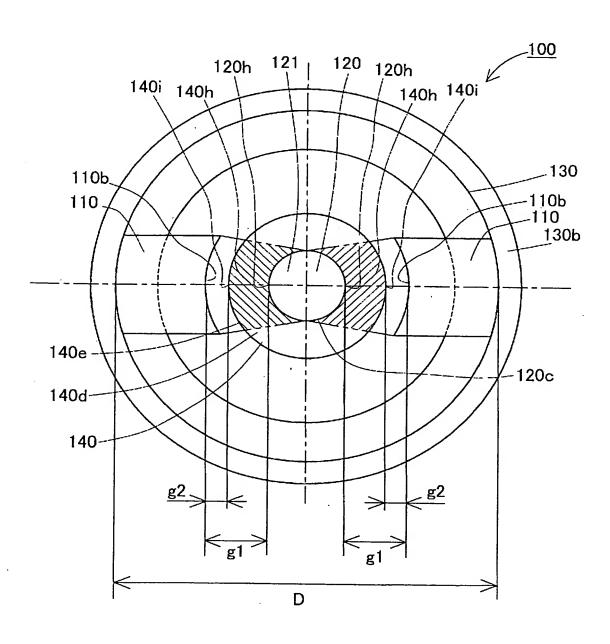
POCKET NO .: NG8775US

FIG. 2



NEW APPLICATION INVENTOR(S): Satoko ITO et al.
TITLE: SPARK PLUG FOR USE IN
INTERNAL COMBUSTION ENGINE
DOCKET NO.: NG8775US

FIG. 3



NEW APPLICATION
INVENTOR(S): Satoko ITO et al.
TITLE: SPARK PLUG FOR USE IN
INTERNAL COMBUSTION ENGINE
DOCKET NO.: NG8775US

## FIG. 4A

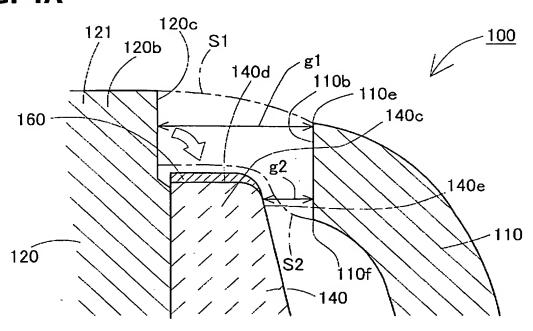
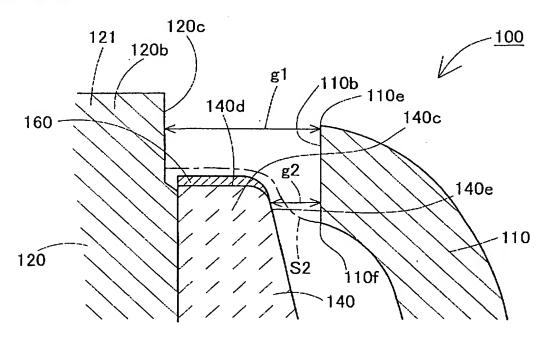


FIG. 4B



NEW APPLICATION INVENTOR(S): Satoko ITO et al. TITLE: SPARK PLUG FOR USE IN

INTERNAL COMBUSTION ENGINE DOCKET NO.: NG8775US

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Cr         Fe         Al         Mn         Si         Ni         (mm³)         (mm³)         (mm³)         (mm³)         Evaluation           1         1.0         1.0         0.5         2.0         1.5         94.0         0.14 A         0.71 X         X           2         6.0         6.0         0.5         2.0         1.5         86.0         0.93 X         0.12 A         X           4         5.0         3.0         0.0         0         1.5         80.5         0.19 A         0.23 B         C           5         5.0         3.0         0.5         0         1.5         80.0         0.31 B         0.27 B         C           6         5.0         3.0         0.5         0.0         1.5         80.0         0.31 B         0.27 B         C           7         5.0         3.0         0.5         2.0         1.5         88.0         0.24 B         0.18 A         A           8         5.0         3.0         0.5         2.0         1.5         88.0         0.24 B         0.18 A         A           10         5.0         3.0         0.5         2.0         1.5         88.0         <	Sample		J	Compone	onents (wt%)	(1		Erosion	Channeling	Comprehensive
1.0         1.0         0.5         2.0         1.5         94.0         0.14 A         0.71 X           6.0         6.0         6.0         0.5         2.0         1.5         86.0         0.93 X         0.12 A           5.0         3.0         0.         0         1.5         86.0         0.93 X         0.12 A           5.0         3.0         0.         0         1.5         89.5         0.19 A         0.56 C           5.0         3.0         0.5         0         1.5         89.8         0.24 B         0.17 A           5.0         3.0         0.5         2.0         1.5         86.0         0.24 B         0.17 A           5.0         3.0         0.5         2.0         1.5         86.0         0.24 B         0.18 A           5.0         3.0         0.5         2.0         1.5         86.0         0.24 B         0.19 A           5.0         3.0         0.5         2.0         1.5         80.0         0.24 B         0.19 A           5.0         3.0         0.5         2.0         1.5         80.0         0.24 B         0.19 A           5.0         3.0         0.8         0		ວັ	æ	¥	Σ	Si	Z	(mm <sup>3</sup> )	(mm)	Evaluation
6.0         6.0         6.0         0.5         2.0         1.5         86.0         0.93 X         0.12 A           5.0         3.0         0         0         1.5         90.5         0.46 C         0.23 B           5.0         3.0         0.5         0         1.5         90.0         0.19 A         0.56 C           5.0         3.0         0.5         0         1.5         89.8         0.24 B         0.17 A           5.0         3.0         0.5         2.0         1.5         88.0         0.24 B         0.18 A           5.0         3.0         0.5         2.0         1.5         88.0         0.24 B         0.18 A           5.0         3.0         0.5         4.0         1.5         86.0         0.39 B         0.24 B           5.0         3.0         0.5         2.0         1.5         90.0         0.21 B         0.19 A           5.0         3.0         0.5         2.0         1.5         90.3         0.26 B         0.19 A           5.0         3.0         0.8         0         1.5         89.7         0.26 B         0.19 A           5.0         3.0         0.5         3.0	-1	1.0	1.0	0.5	2.0	1.5	94.0	0.14 A	0.71 X	×
5.0         3.0         0         0         1.5         90.5         0.46C         0.23 B           5.0         3.0         1.0         0         1.5         89.5         0.19 A         0.56C           5.0         3.0         0.5         0         1.5         89.8         0.24 B         0.27 B           5.0         3.0         0.5         2.0         1.5         88.0         0.24 B         0.18 A           5.0         3.0         0.5         2.0         1.5         86.0         0.39 B         0.24 B           5.0         3.0         0.5         2.0         1.5         86.0         0.21 B         0.19 A           5.0         3.0         0.5         2.0         1.5         90.3         0.26 B         0.19 A           5.0         3.0         0.8         0         1.5         89.7         0.26 B         0.19 A           5.0         3.0         0.8         0         1.5         89.9         0.22 B         0.19 A           5.0         3.0         0.5         0.15         1.5         87.0         0.29 B         0.19 A           5.0         3.0         0.5         2.0         1.5	2	0'9	9	0.5	2.0	1.5	86.0	0.93 X	0.12 A	×
5.0         3.0         1.0         0         1.5         89.5         0.19 A         0.56 C           5.0         3.0         0.5         0         1.5         90.0         0.31 B         0.27 B           5.0         3.0         0.5         2.0         1.5         88.0         0.24 B         0.17 A           5.0         3.0         0.5         2.0         1.5         88.0         0.26 B         0.18 A           5.0         3.0         0.5         2.0         1.5         86.0         0.39 B         0.19 A           5.0         3.0         0.5         2.0         1.5         90.0         0.21 B         0.19 A           5.0         3.0         0.2         0         1.5         89.7         0.26 B         0.19 A           5.0         3.0         0.5         0.15         1.5         89.9         0.22 B         0.19 A           5.0         3.0         0.5         0.15         1.5         87.0         0.29 B         0.19 A           1.5         1.0         0.5         2.0         1.5         83.5         0.18 A         0.19 A           1.0         1.5         2.0         1.5         86.	က	5.0	3.0	0	0	1.5	90.5	0.46 C	0.23 B	ပ
5.0         3.0         0.5         0         1.5         90.0         0.31B         0.27B           5.0         3.0         0.5         0.2         1.5         89.8         0.24B         0.17A           5.0         3.0         0.5         2.0         1.5         88.0         0.26B         0.18A           5.0         3.0         0.5         4.0         1.5         86.0         0.39B         0.24B           5.0         3.0         0.5         2.0         1.5         90.0         0.21B         0.19A           5.0         3.0         0.5         0.15         1.5         89.7         0.26B         0.19A           5.0         3.0         0.5         0.15         1.5         89.9         0.22B         0.19A           5.0         3.0         0.5         2.0         1.5         87.0         0.29B         0.19A           1.5         1.0         0.5         2.0         1.5         93.5         0.18A         0.39B           5.0         5.0         5.0         0.5         2.0         1.5         86.0         0.38B         0.17A	4	2.0	3.0	1.0	0	1.5	89.5	0.19 A	0.56 C	၁
5.0         3.0         0.5         0.2         1.5         89.8         0.24 B         0.17 A           5.0         3.0         0.5         2.0         1.5         88.0         0.26 B         0.18 A           5.0         3.0         0.5         4.0         1.5         86.0         0.39 B         0.24 B           3.0         3.0         0.5         2.0         1.5         90.0         0.21 B         0.19 A           5.0         3.0         0.2         0         1.5         89.7         0.26 B         0.39 B           5.0         3.0         0.8         0         1.5         89.7         0.26 B         0.39 B           5.0         3.0         0.5         0.15         1.5         89.9         0.22 B         0.19 A           5.0         3.0         0.5         3.0         1.5         87.0         0.29 B         0.19 A           1.5         1.0         0.5         2.0         1.5         93.5         0.18 A         0.19 A           5.0         5.0         5.0         0.5         2.0         1.5         86.0         0.38 B         0.17 A	5	2.0	3.0	0.5	0	1.5	90.0	0.31 B	0.27 B	8
5.0         3.0         0.5         2.0         1.5         88.0         0.26 B         0.18 A           5.0         3.0         0.5         4.0         1.5         86.0         0.39 B         0.24 B           3.0         3.0         0.5         2.0         1.5         90.0         0.21 B         0.19 A           5.0         3.0         0.2         0         1.5         90.3         0.37 B         0.26 B           5.0         3.0         0.8         0         1.5         89.7         0.26 B         0.39 B           5.0         3.0         0.5         0.15         1.5         89.9         0.22 B         0.19 A           5.0         3.0         0.5         3.0         1.5         87.0         0.29 B         0.19 A           1.5         1.0         0.5         2.0         1.5         93.5         0.18 A         0.39 B           1.0         1.5         0.5         2.0         1.5         93.5         0.17 A         0.39 B           5.0         5.0         0.5         2.0         1.5         86.0         0.38 B         0.17 A	9	5.0	3.0	0.5	0.2	1.5	868	0.24 B	0.17 A	Ø
5.03.00.54.01.586.00.39 B0.24 B3.00.52.01.590.00.21 B0.19 A5.03.00.201.590.30.37 B0.26 B5.03.00.801.589.70.26 B0.39 B5.03.00.50.151.589.90.22 B0.19 A5.03.00.53.01.587.00.29 B0.19 A1.51.00.52.01.593.50.18 A0.38 B1.01.50.52.01.586.00.38 B0.17 A	7	2.0	3.0	0.5	2.0	1.5	88.0	0.26 B	0.18 A	A
3.0         3.0         0.5         2.0         1.5         90.0         0.21 B         0.19 A           5.0         3.0         0.2         0         1.5         90.3         0.37 B         0.26 B           5.0         3.0         0.8         0         1.5         89.7         0.26 B         0.39 B           5.0         3.0         0.5         0.15         1.5         87.0         0.22 B         0.19 A           5.0         3.0         0.5         3.0         1.5         87.0         0.29 B         0.19 A           1.5         1.0         0.5         2.0         1.5         93.5         0.18 A         0.38 B           5.0         5.0         0.5         2.0         1.5         86.0         0.38 B         0.17 A	œ	2.0	3.0	0.5	4.0	1.5	86.0	0.39 B	0.24 B	8
5.0         3.0         0.2         0         1.5         90.3         0.37 B         0.26 B           5.0         3.0         0.8         0         1.5         89.7         0.26 B         0.39 B           5.0         3.0         0.5         0.15         1.5         87.0         0.22 B         0.19 A           5.0         3.0         0.5         2.0         1.5         87.0         0.29 B         0.19 A           1.5         1.0         0.5         2.0         1.5         93.5         0.18 A         0.38 B           1.0         1.5         0.5         2.0         1.5         93.5         0.17 A         0.39 B           5.0         5.0         0.5         2.0         1.5         86.0         0.38 B         0.17 A	6	3.0	3.0	0.5	2.0	1.5	90.0	0.21 B	0.19 A	A
5.0         3.0         0.8         0         1.5         89.7         0.26 B         0.39 B           5.0         3.0         0.5         0.15         1.5         89.9         0.22 B         0.19 A           5.0         3.0         0.5         3.0         1.5         87.0         0.29 B         0.19 A           1.5         1.0         0.5         2.0         1.5         93.5         0.18 A         0.38 B           1.0         1.5         0.5         2.0         1.5         93.5         0.17 A         0.39 B           5.0         5.0         0.5         2.0         1.5         86.0         0.38 B         0.17 A	10	2.0	3.0	0.2	0	1.5	90.3	0.37 B	0.26 B	æ
5.0       3.0       0.5       0.15       1.5       89.9       0.22 B       0.19 A         5.0       3.0       0.5       3.0       1.5       87.0       0.29 B       0.19 A         1.5       1.0       0.5       2.0       1.5       93.5       0.18 A       0.38 B         1.0       1.5       0.5       2.0       1.5       93.5       0.17 A       0.39 B         5.0       5.0       0.5       2.0       1.5       86.0       0.38 B       0.17 A	11	2.0	3.0	8.0	0	1.5	89.7	0.26 B	0.39 B	8
5.0         3.0         0.5         3.0         1.5         87.0         0.29 B         0.19 A           1.5         1.0         0.5         2.0         1.5         93.5         0.18 A         0.38 B           1.0         1.5         0.5         2.0         1.5         93.5         0.17 A         0.39 B           5.0         5.0         0.5         2.0         1.5         86.0         0.38 B         0.17 A	12	2.0	3.0	0.5	0.15	1.5	6.68	0.22 B	0.19 A	A
1.5     1.0     0.5     2.0     1.5     93.5     0.18 A     0.38 B       1.0     1.5     0.5     2.0     1.5     93.5     0.17 A     0.39 B       5.0     5.0     0.5     2.0     1.5     86.0     0.38 B     0.17 A	13	5.0	3.0	0.5	3.0	1.5	87.0	0.29 B	0.19 A	A
1.0         1.5         0.5         2.0         1.5         93.5         0.17 A         0.39 B           5.0         5.0         0.5         2.0         1.5         86.0         0.38 B         0.17 A	14	1.5	1.0	0.5	2.0	1.5	93.5	0.18 A	0.38 B	A
5.0 5.0 0.5 2.0 1.5 86.0 0.38 B 0.17 A	15	1.0	1.5	0.5	2.0	1.5	93.5	0.17 A	0.39 B	A
	16	2.0	2.0	0.5	2.0	1.5	86.0	0.38 B	0.17 A	A

Comprehensive evaluation **Evaluation of channeling Evaluation of erosion** 

A: less than 0.2 B: 0.2 to less than 0.4 C: 0.4 to less than 0.6 X: 0.6 or more X: 0.6 or more A: less than 0.2 B: 0.2 to less than 0.4 C: 0.4 to less than 0.6

X: At least either erosion or channeling is evaluated as X. C: At least either erosion or channeling is evaluated as C.

B: Erosion and channeling are both evaluated as B.

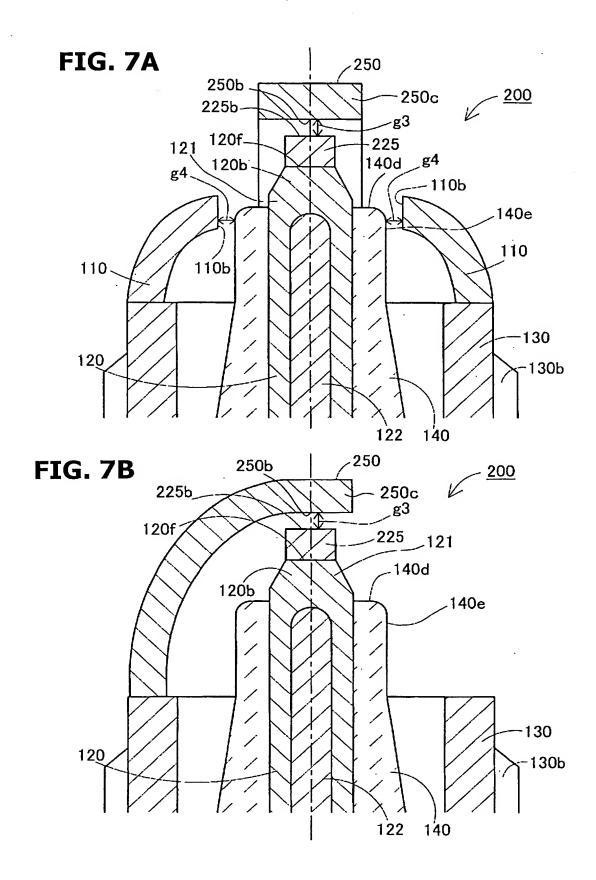
A: At least either erosion or channeling is evaluated as A, and neither erosion nor channeling is evaluated as X or B.

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			Com	Components (wt%)	vt%)			Sink	Evaluation
Ċ		Fe	AI	Mn	U	Si	Z	(mm)	
3.0		3.0	0.5	2.0	0.001	1.5	89.99	0.10	ပ
3.0		3.0	0.5	2.0	0.003	1.5	89.99	0.07	В
3.0		3.0	0.5	2.0	0.05	1.5	89.95	0.02	A
3.0		3.0	0.5	2.0	0.1	1.5	89.90	0.00	A
less t	£	A: less than 0.04	B: 0.04 t	B: 0.04 to less than 0.08		C: 0.08 to	C: 0.08 to less than 0.12	12	

NEW APPLICATION
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